

WHAT IS CLAIMED IS:

5 1. A method of manufacturing a separator for a fuel cell comprising:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin;

charging the raw material into a predetermined mold;
and

heat press forming the raw material charged into the
mold.

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2. A method according to claim 1, wherein, when heated to chemically react and cure the epoxy resin and the phenolic resin, a ratio of an amount of an epoxy group of the chemically reacted epoxy resin to an amount of hydroxyl group of the chemically reacted phenolic resin is adjusted 15 to a value ranging from 0.8 to 1.2.

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3. A method according to claim 1, wherein the epoxy resin comprises a cresol novolac type epoxy resin.

4. A method according to claim 1, wherein the epoxy resin comprises a glycidylamine type epoxy resin.

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5. A method according to claim 1, wherein the epoxy resin comprises a bisphenol A type epoxy resin.

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6. A method according to claim 1, wherein the phenolic resin comprises a novolac type phenolic resin.

7. A method according to claim 1, wherein the phenolic resin comprises a resol type phenolic resin.

8. A method according to claim 1, wherein the carbon comprises a powder formed of scaly natural graphite particles having an average particle size ranging from 5 to 10 $50\mu\text{m}$.

9. A method according to claim 1, wherein the step of preparing the raw material includes the substeps of:

forming the raw material into a slurry; and

15 preparing a powder having an average particle size ranging from 50 to $150\mu\text{m}$ and a particle size distribution ranging from 50 to $300\mu\text{m}$ by spraying and drying the slurry for granulation.

20 10. A method according to claim 1, further comprising the step of grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

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11. A method according to claim 1, wherein a ratio of a

density of the separator to a theoretical density is at least 93%, wherein the theoretical density is derived from a density of a material constituting the raw material and a component ratio thereof.

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12. A separator for a fuel cell comprising:
an aggregation of carbon particles; and
a binder containing phenolic resin and epoxy resin,
which is charged in a clearance among the aggregated carbon
10 particles.

